



# ARAT Bulletin



*"Serving the Army Reprogramming Community Since 1994"*

Volume 4, Issue 3

December 1997

## *Delivering Information to the Warfighter*



### *ARAT Project Support for the Army Aviation Mission Planning System (AMPS) (Part Two of a Two Part Series)*

***NOTE TO READERS:** In the first part of this two part series (see the September 1997 issue), the Electronic Warfare Officer Support Software (EWOSS) and the AMPS mission planning system were discussed in terms of an integrated capability, with AMPS providing Target Sensing System (TSS) Mission Data Set (MDS) reprogramming as part of the mission planning process. The AMPS and EWOSS software are separate and independent applications that will share the AMPS hardware, but will be provided on separate hard drives.*

### *EWOSS Development Plan*

**Currently**, EWOSS is being developed as an integrated application on its own hard drive, that runs on the AMPS hardware, but does not interact with the AMPS software environment (Figure 1, see Page 3). The first field release of EWOSS will provide **minimum essential services** (MES) necessary to access ARAT data, request MDS support, download and manage MDS data, and transfer MDS to media and other load devices. To switch between mission planning and TSS rapid reprogramming functions at the unit level, the AMPS hardware will need to be "powered down", the AMPS and EWOSS removable drives exchanged, and the system restarted.

*(cont. Page 3)*

#### *In This Issue*

AMPS	1
From the Project Office	2
Exercises on the Web	6
MSEWBBS Libraries	7
Notes to the Field	10
FYI	13

## *From the Project Officer's Desk*

Written by Mr. Joseph Ingrao, ARAT Project Officer

[JS1]

### *Software Reprogramming / Updating Mission Data Sets, It's a frame of mind!*

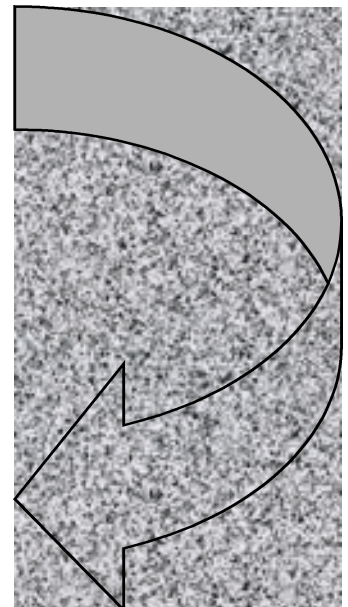
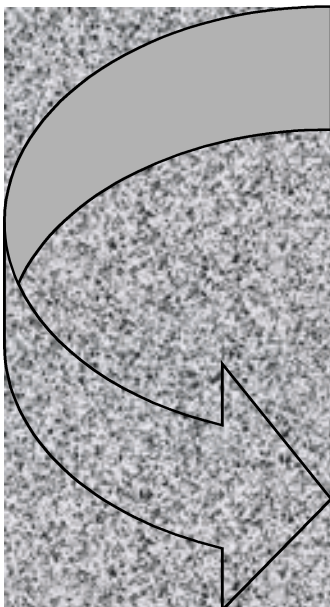


In many organizations, apathy, laziness, distraction, and interference can all lead to a self-inflicted workplace crisis created by the failure to do what needs to be done within acceptable time limits or according to established standards. Panic will soon occur and the frantic search for a quick solution usually follows.

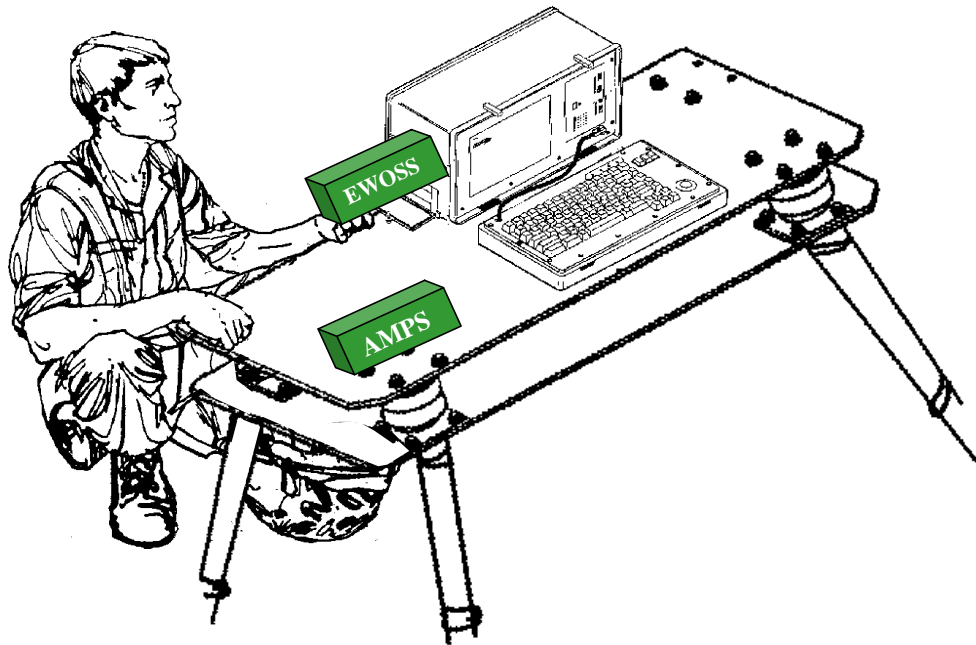
At best, one person's procrastination disrupts the work of others. At worst, procrastination undermines productivity, erodes organizational morale, and creates unnecessary workplace stress. Procrastination can hardly be considered an admirable leadership quality, and it is incompatible with the qualities of an effective team or unit.

In the field, important responsibilities must be undertaken with a sense of urgency marked by constant resolve and purposeful action. Neither panic nor frenzy attends the urgency with which a leader or his staff should perform their duties or in how they direct the activities of others.

In keeping with the requirement and need for Rapid Reprogramming of Threat Data, the men and women from the PM-Apache Longbow AN/APR-48A RFI team are applying the ARAT process and capability to their system. Neither panic nor the frantic search for a quick solution will be their status quo. Competently led, the men and women who serve on the PM-Apache Longbow AN/APR-48A RFI team are people of enthusiastic spirit who have a keen sense of what is urgent and what can wait.



## *ARAT Project Support for the Army Aviation Mission Planning System (AMPS) (Part Two of a Two Part Series) (cont. from cover)*



*Figure 1: EWOSS & AMPS Hard Drive Concept.*

The decision to separate AMPS and EWOSS software functions allows EWOSS to take advantage of the latest commercial-off-the-shelf (COTS) software tools and technologies. EWOSS will be hosted on *Windows95/NT*<sup>®</sup>, providing compatibility with home station and field PC software. Common Army office automation software such as *Microsoft*<sup>®</sup> (MS) *Office* can be installed at the unit level to further aid the EWO, either in the field or at deployed locations, to perform staff and mission related duties. The ARAT will not provide any additional software applications other than the Operating System and EWOSS on the EWOSS drive. A list of approved applications for unit level procurement and

installation will be provided with each EWOSS release.

To reemphasize, the EWOSS will be provided to Army aviation units equipped with AMPS on a separate, AMPS-hardware-compatible, hard drive. To use EWOSS, the AMPS hardware is powered down, the AMPS software hard drive exchanged for the EWOSS drive, and the system is restarted.

With the MES EWOSS, units will have several options in the way they manage MDS to support operations. MDS read, write, and selection access will be normally limited to unit EWOs, who perform MDS evaluation and selection for the aircrews (Figure 2, next page). (*cont. next page*)

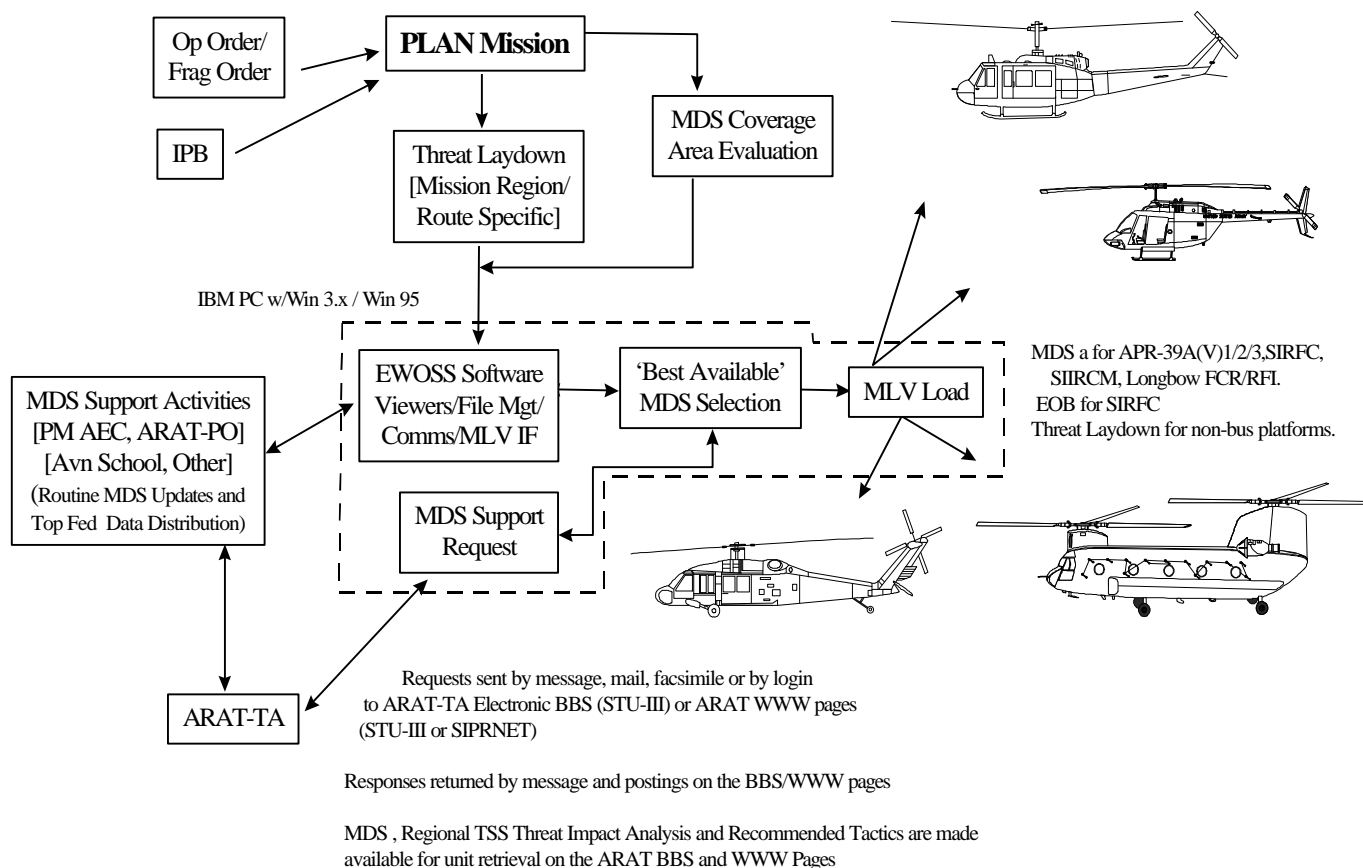


**AMPS (cont.)**

All users will be allowed access to MDS threat description data, as well as kneeboard card viewing and printing functions. Units that have a high degree of aircrew familiarity with TSS and MDS selection may elect to allow aircrews, in addition to the unit EWO, to select MDS.

EWOSS software will contain the necessary functions to obtain connections to tactical communications and networks, as well as dial-up

services using STU-III telephones. EWOSS software developers also are investigating the ability to connect to intelligence and other command and control systems. These connections will aid the unit EWO to maintain a current, TSS oriented, order of battle picture, and to exchange information between units. Finally, some system administration will be required at unit level: i.e., entering and maintaining network addresses, password files/privileges and other system information.



**Figure 2: Current EWOSS - Mission Planning Integration Concept**

*(cont. next page)*

*AMPS (cont.)****EWOSS for AMPS Hardware and PCs running Windows 95/NT***

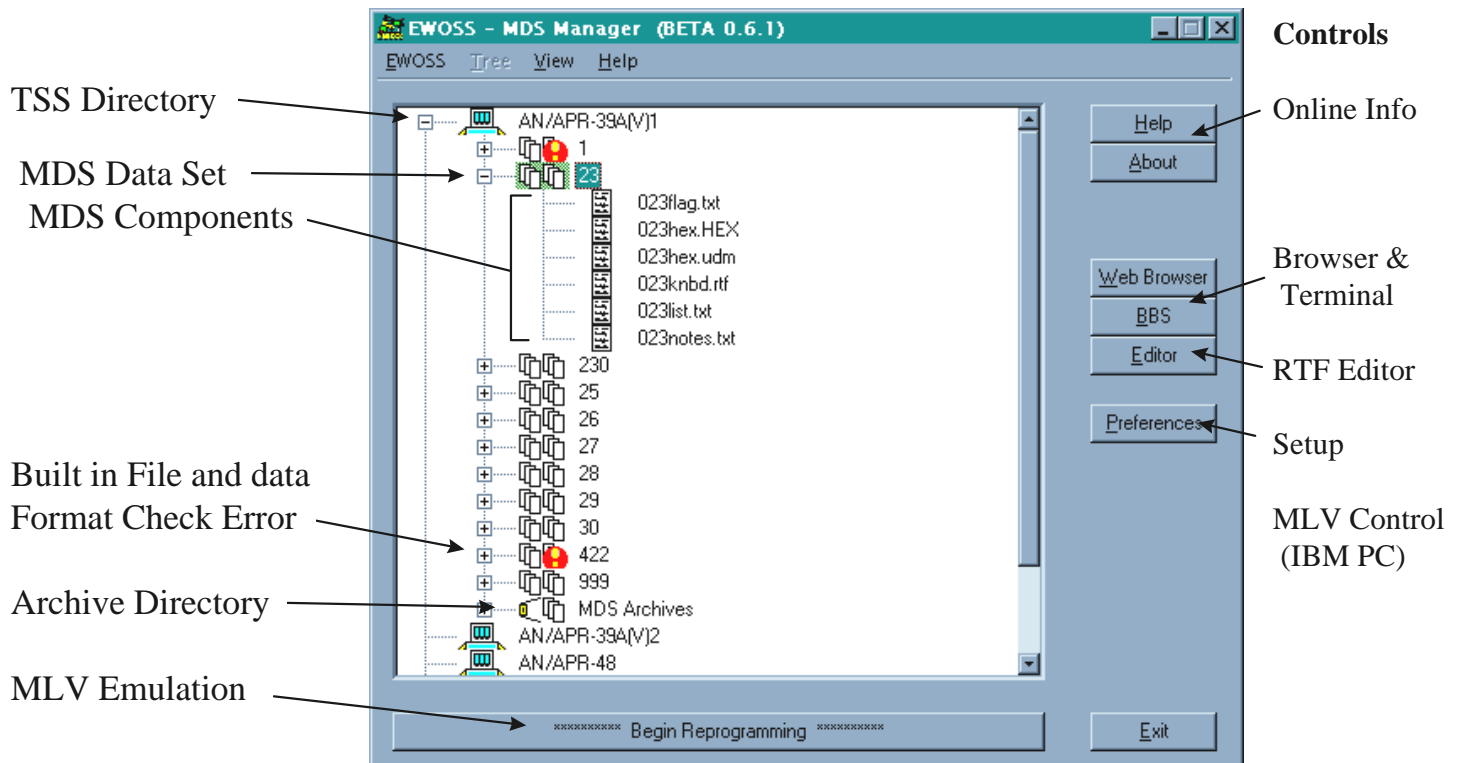
The ARAT Project Office will distribute EWOSS to the field for evaluation and use in FY98 as part of normal Warfighter support. The EWOSS will be released in two versions:

- EWOSS for AMPS - Communications and MDS management functions distributed on an AMPS compatible removable hard drive.
- EWOSS for Intel-based Personal Computers (PC) running *Windows95/NT*<sup>®</sup> - In addition

to having the same functions as EWOSS for AMPS, EWOSS for PCs will include the current DOS-based MLV emulation program, and a new windows based version of the AN/APR-39A(V)1 MLV emulation program.

In the latter version, the MLV functions will be updated (in the future) to include new TSS.

Candidates being investigated at present for PC MLV emulation include: AN/APR-39A(V)2, AN/APR-48, AN/ALQ-211 SIRFC, AN/ALQ-212 SIIRCM, AN/AVR-2A Laser Detection Set, AN/AVS-9 Heads Up Display and Longbow FCR.

**Manager Window - MDS file and Directory Management**

***Figure 3: EWOSS Prototype Main Application User Interface Window***

*(cont. next page)*

## EWOSS Availability

The EWOSS will be made available for PCs running *Windows 95/NT*<sup>®</sup> in the spring of 1998. EWOSS is currently in beta form, and is available for limited evaluation on a case by case basis. The EWOSS will be made available for the AMPS platform in the fall of 1998, using a separate AMPS-compatible removable hard drive. Initial distribution of the EWOSS-for-PC will be to units registered and active on the ARAT secure BBS and Web. If your unit does not have an account, contact the ARAT Project Office or ARAT-TA.

Once the EWOSS hard drive has been used to connect to the ARAT secure BBS and Web sites, it will need to be stored as classified material. Physical and security issues and requirements will be addressed in the documentation accompanying EWOSS software releases.

## Where to go for more information

If you have any EWOSS development questions, or wish to request beta release software, contact the ARAT Project Office (addresses and points of contact are listed on Page 15). *Written by Mr. Jim Holland, EWOSS Development Team Leader, SRI, Inc.*

## ARAT EXERCISES ON THE WEB

**One** of the inherent benefits of conducting reprogramming exercises is the knowledge we gain from these events. These exercises give us the ability to evaluate our experience, decide how to operate better or differently next time, address or correct difficulties we encountered, and share with others what has been done exceptionally well. We must document what we've learned during exercises in the form of an After Action Report (AAR). By doing so, we produce a record with which, in the future, we can improve upon accomplishments, set objectives for future exercises, and maintain feedback from the Army Reprogramming community. The Army Reprogramming Analysis Team Project Office (ARAT-PO) has developed an Army Reprogramming Exercise Lessons Learned database on the ARAT classified Web site. The structure of this database is based upon that of the Joint Universal Lessons Learned System (JULLS), which enables AARs to be more efficiently categorized, managed and accessed by all of the Services.

The database affords the Warfighter an opportunity to access and review Reprogramming Exercise AARs via the secure ARAT Web site. It

also saves the ARAT program time and money. The following exercise lessons learned are posted on the ARAT classified Web site: *Proud Byte '92 After Action Report, Brave Byte '92 After Action Report, Serene Byte '92 After Action Report, Proud Byte '93 After Action Report, Neptune Byte '93 After Action Report, Proud Byte '94 After Action Report, Brave Byte '94 After Action Report, and Brave Byte '96 After Action Report.*

Accessing these reports is simple. Go to the ARAT classified Web site and click on "Lessons Learned". The next page will display all reprogramming exercises to date. Then click on the exercise you want to review. The next page will display the Table of Contents, which lists all lessons learned for that particular exercise. Then click on the particular lesson. You are now able to browse and access all reprogramming exercises AARs and lessons learned. And if you have questions that cannot be answered, each lesson learned has a POC and phone number for you to contact. *Written by Mr. Sam Johnson, Ilex Systems, Inc.*

## ***MSEWBBS - IT'S STOCKED WITH EW GOODIES!***

**I**t is hard to believe the Army portion of the Multi-Service Electronic Warfare Bulletin Board System (MSEWBBS) has been in existence for over three years. Since July 1994, the MSEWBBS has seen both major and minor additions and deletions to the information in its libraries and files. It has been a perpetual demonstration of the ARAT's flexibility and timely response to 'our customers' - the SOLDIER, AIRMAN, SAILOR AND MARINE- and the contractors and other government agencies supporting the Warfighter. With so much relevant data now available in secure cyberspace, it is apropos to provide an update on the MSEWBBS's status, how it continues to relate to ATSS, the type of data viewable and retrievable, and some projected changes.

The Army had two driving requirements when it decided to support MSEWBBS operations:

- To provide an easy, economical and dependable medium to comply with Army Target Sensing System (ATSS) reprogramming timelines as outlined in AR 525-15.
- To provide a secure and easily accessible medium through which Army Aviation Electronic Warfare Officers (EWOs) can interact and retrieve classified information relating directly to the efficient planning and use of ATSS. (This function is based on an agreement with the Program Manager for Aviation Electronic Combat [PM-AEC]. PM-AEC determined they would maintain an unsecure BBS on AEC systems, complemented by the collateral level MSEWBBS data maintained by the Army

Reprogramming Analysis Team - Threat Analysis [ARAT-TA]).

Generally, the Army portion of the MSEWBBS consists of Library Information Banks (LIBRARIES or LIBS). These diverse LIBS contain files of classified information that amplify or expand on threat or technical information already promulgated by the Army, Air Force, Navy, Defense Intelligence Agency, National Security Agency, Central Intelligence Agency, and other validated intelligence sources. (Note: Although the ARAT-TA is NOT an intelligence agency nor a source generator, per se, it judiciously selects and posts, on the MSEWBBS, collateral level information having direct association and applicability with ATSS - its operation, capabilities and limitations.) Such information is an easily produced byproduct of our daily operations. ARAT-TA ELINT Analysts (98J's) and engineers 'consume' relevant information and then further disseminate it, by source reference, to MSEWBBS users - primarily Army EWOs.

In reviewing our General Information File, we currently list approximately 34 libraries (this number can vary depending upon user requirements). Some LIBS are not directly available to all subscribers due to "need to know" requirements. For example, the ARAT-TA uses the "CECOM LIB" as the back channel means of communication with the Communications and Electronics Command (CECOM) Software Engineering Center. We pass emitter parameters, symbology, pertinent notes, and back-up information during the creation and testing of the Mission Data Sets (MDS) that are accessible on the MSEWBBS.

*(cont. next page)*

**MSEWBBS (cont.)**

The following table provides a synopsis of the most commonly used Army LIBS:

<b>LIBRARY</b>	<b>DESCRIPTION</b>
<b>“AAA”</b>	<b>(ANTI-AIRCRAFT ARTILLERY)</b> – Describes capabilities and performance of anti-aircraft artillery systems, both land and naval variants, applicable to ATSS. Thus we <u>might</u> describe the: Russian Tunguska-M1 <sup>(1)</sup> and Kashtan AAA-missile complex <sup>(2)</sup> .
<b>“AAMS”</b>	<b>(AIR TO AIR MISSILES)</b> – Describes capabilities and performance of air to air missiles, both Infrared and Radio Frequency guided variants, applicable to ATSS. Thus we <u>might</u> describe the: Chinese PL-9 <sup>(3)</sup> , and the Russian RVV-AE Medium Range Missile <sup>(4)</sup> .
<b>“AAR47”</b>	<b>(AN/AAR-47)</b> – Describes the AN/AAR-47 Missile Warning System, its capabilities, theory of operation and limitations. Although a Navy-led system, it is used by all the services on many types of platforms.
<b>“ALQ136”</b>	<b>(AN/ALQ-136(V)1/2/5)</b> – Describes the AN/ALQ-136(V)1/2/5, its capabilities and limitations. It also contains the prioritized threat lists, associated radar names and notes relative to these systems.
<b>“ALQ144A”</b>	<b>(AN/ALQ-144A(V)1/3)</b> – Describes the AN/ALQ-144A(V)1/3 IR Countermeasures System, its capabilities and limitations. Contains the selectable jamming codes, associated threats and notes.
<b>“ALQ156”</b>	<b>(AN/ALQ-156(V)1/2/3)</b> – Describes the AN/ALQ-156(V)1/2/3 Missile Approach Detector System, its capabilities, limitations and other notes. This system plays an integral part in aircraft survivability.
<b>“ALQ162”</b>	<b>(AN/ALQ-162(V)2/3/4)</b> – Describes the AN/ALQ-162(V)2/3/4 Countermeasures System, its capabilities, limitations and pertinent notes. This is a Navy-lead system used by all services on different types of platforms.
<b>“APR39AV1”</b>	<b>(AN/APR-39A(V)1)</b> – Describes the AN/APR-39A(V)1 system, its capabilities and limitations. Available MDS, download instructions and reprogramming software are also provided.
<b>“APR39AV2”</b>	<b>(AN/APR-39A(V)2)</b> – Describes the AN/APR-39A(V)2 system, its capabilities and limitations, and available MDS and download instructions. This system is just commencing the fielding process, and this LIB will see extensive additions as the USN/USMC engineer collocated at the ARAT-TA builds MDSs.
<b>“APR39V2”</b>	<b>(AN/APR-39(V)2)</b> – Describes the AN/APR-39(V)2 system, its capabilities, limitations and information relating to available MDS. MDS files, in reprogramming format and regionally aligned, will be posted soon.
<b>“APR44”</b>	<b>(AN/APR-44(V)1/3)</b> Describes the AN/APR-44 (V)1/3 system, its capabilities and limitations. Although not strictly ATSS, it complements the efficient use and operation of other ATSS.
<b>“ARATEWOP”*</b>	<b>(ARAT ELECTRONIC WARFARE (EW) OPERATIONAL PROGRAMMING)</b> – Contains technical data passed between the ARAT-TA and the Navy for building USN/USMC AN/APR-39A(V)2 MDS.
<b>“ARATNAWC”*</b>	<b>(ARAT-TA/SE AND NAWCWPN COMMANDS)</b> – Provides technical data exchange capability between ARAT-TA and the USN NAWCWPN COMMANDS for the AN/APR-39A(V)2 RSDS.
<b>“ARATSCAV”</b>	<b>(ARAT SUPPORT CELL)</b> – Provides technical data exchange capability between ARAT-TA and the US Army Aviation Support Cell at Ft. Rucker AL.
<b>“ARMYFLAG”</b>	<b>(PARAMETER CHANGE ALERTS)</b> - Contains parameter change alerts on emitters programmed into MDS.
<b>“ASMS”</b>	<b>(AIR TO SURFACE MISSILES)</b> - Describes capabilities and performance of air to surface systems, both land and naval variants as they apply to ATSS. Thus we <u>might</u> describe the Russian AS-12 <sup>(5)</sup> .
<b>“ATIRCM”*</b>	<b>(ADVANCED THREAT IRCM)</b> - Contains developmental data passed between ARAT-TA, PM-AEC, CECOM, the USAAVNC and the prime contractor.
<b>“ATRJ”*</b>	<b>(ADVANCED THREAT RADAR JAMMER)</b> – Contains developmental data passed between the ARAT-TA, PM-AEC, CECOM, the USAAVNC and the prime contractor.
<b>“AVR2”</b>	<b>(AN/AVR-2A(V))</b> – Describes the AN/AVR-2A(V) system, its capabilities and limitations. Although not strictly an ATSS, it complements the efficient use and operation of other ATSS.
<b>“AVNCTR”</b>	<b>(US ARMY AVIATION CENTER)</b> – Provides information updated by the USAAVNC at FT Rucker, AL, on course dates and other pertinent information related to the use of AEC, e.g., TTPs.
<b>“BBSOPS”</b>	<b>(BULLETIN BOARD SYSTEM OPERATIONS)</b> – Contains specific operating instructions. It is primarily a US Air Force LIB but is open to all subscribers.
<b>“BRBYTE”</b>	<b>(BRAVE BYTE)</b> – Contains information relating to the annual reprogramming exercise.
<b>“CECOM”</b>	<b>(COMMUNICATIONS ELECTRONICS COMMAND)</b> - see earlier information on this LIB.
<b>“CONTRACT”*</b>	<b>(CONTRACTOR)</b> – Contains information for specific contractors that are working on ATSS efforts.
<b>“EO-IR”</b>	<b>(ELECTRO-OPTICAL – INFRARED)</b> - Contains new information relating to ATSS in areas of Laser, Night Vision, Thermal or general EO-IR technology. You <u>might</u> see information on the AR-3 <sup>(6)</sup> , and SHOTRA-1 <sup>(7)</sup> .

*(cont. next page)*



**MSEWBBS (cont.)**

<b>LIBRARY</b>	<b>DESCRIPTION</b>
<b>“EWINFO”</b>	<b>(ELECTRONIC WARFARE INFORMATION)</b> – Contains new or late breaking information that relates to ATSS in the areas of Jammers, Antennas, Passive systems and parametrics. Thus you <u>might</u> see information on the Russian SPN-2 <sup>(8)</sup> , Chinese YLC-4 Surveillance Antenna <sup>(9)</sup> , and AN/ALQ-142 <sup>(10)</sup> .
<b>“HOTSPOTS”</b>	<b>(HOTSPOTS)</b> - Contains information on ‘hot’ areas: possible threats, recent ‘intel’ summaries and other pertinent notes. As world and deployment events change this LIB adds and deletes information that has bearing on our ATSS. Thus, you <u>might</u> see information on Bosnia, North Korea, Iraq, and Iran.
<b>“MASINT”</b>	<b>(MEASUREMENT AND SIGNATURE INTELLIGENCE)</b> – Contains information on aspects of MASINT.
<b>“PLATFORM”</b>	<b>(PLATFORMS)</b> – Contains information on various threat platforms and how they might relate to our ATSS. Information in here relates to: Tanks, Helicopters, Aircraft, Ships etc., and <u>might</u> see information on; the T-80UK <sup>(11)</sup> , Kamov Ka-52 (Hokum B) characteristics and sensors <sup>(12)</sup> , SU-27 characteristics and sensors <sup>(13)</sup> , and the RNL Navy Air Defense and Command Frigate armament, radars and EW <sup>(14)</sup> .
<b>“RADARS”</b>	<b>(RADARS)</b> – Contains miscellaneous parametric information on radar systems. You <u>might</u> see data on unusual parameters of Land Roll, Gun Dish, and Slot Back (15) radars identified in specific areas/modes of operation. This is designed primarily for ARAT-TA and CECOM, but is available to our approved subscribers.
<b>“SAMS”</b>	<b>(SURFACE TO AIR MISSILES)</b> – Describes capabilities and performance of surface to air systems, both land and naval, and Radio Frequency and Infrared variants as they apply to ATSS. Thus, we <u>might</u> provide recent information on the SA-15, SA-N-6, and the SA-18 <sup>(16)</sup> .
<b>“SERENBY”</b>	<b>(SERENE BYTE)</b> - Contains information dealing with the SERENE BYTE Exercise. Maintained by the USAF, it includes information that relates to the US Army active participation in the exercise.
<b>* Restricted access based on established need-to-know</b>	

To the reader, it may seem as if there are many LIBS to be maintained. Actually, not all LIBS change on a daily basis. When you open the Army maintained LIBS, you will find the last update time at the top of each file. Rest assured when releasable and pertinent ATSS information hits the streets, your ARAT-TA will bring it to you. Although the majority of it will be synopsisized, it will provide a place to go to ‘flesh-out’ requirements.

Although the MSEWBBS is considered an everyday “place to go” to support EWO tasking, it is not going to remain static. With communication capabilities expanding rapidly, the ARAT-PO has directed the MSEWBBS to be part of a larger network. Changes will be taking place in the next six months that will enhance connectivity and enable greater data retrieval. The rapid expansion and use of SIPRNET throughout the Army will

amplify the use and development of the MSEWBBS.

In drawing this epistle to an end, we do have a confession to make. If you go into a few of the LIBS outlined above, you may find some unpopulated files; the ARAT-TA has yet to complete some of the information. Our *raison d’être* for not doing so has been the high demand to build MDSs to meet block cycle and emergency regional requirements. If, as a user, you cannot find something that you need immediately to support the use of your ATSS, do not hesitate to call the ARAT-TA or PO. (MSEWBBS Access- Mr. Bob Hankins [850-882-2166, DSN: 872]; MSEWBBS Data- Mr. Norm Svarrer [850-882-8899/8919, DSN: 872]; MSEWBBS Future Planning, Mr. Joe Ingrao [732-532-1337, DSN: 992]. *Written by Mr. Pete McGrew, SRI International, ARAT-TA*

**References:**

(1) Rosvoorouzhnie, Moscow, Russia, Tunguska-M1 Anti-aircraft gun/missile System Brochure.	(9) CEIEC, Beijing, China, YLC-4 Long Range Surveillance Radar Brochure.
(2) Tulamashzavod, Tula, Russia, Kashtan Close-In Defence Missile Artillery Complex Brochure.	(10) International Electronic Countermeasures Handbook 1996, Page 44.
(3) Flight International, 16-22 March 1994, Page 34.	(11) Rosvoorouzhnie, T-80UK brochure, displaying Performance Data: Armament, Fire Control, Protection and Propulsion.
(4) Russia's Arms Catalog Volume III, Air Force, 1996-97, Pages 241-243.	(12) Air International, July 1997, Pages 29-35.
(5) Flight International 27 July-2 August 1994, Page 36.	(13) Janes Intelligence Review, May 1995, Page 212
(6) ATCOP, Pakistan, AR-3, Laser Range Finder Technical Data Brochure.	(14) DEFENSE News, Worldwide Naval Review, June 1996, Page 12.
(7) Parade Magazine, September-October 1995, Invisible but Effective Protection, Pages 59-61.	(15) International Defense Electronics Systems Handbook, First Edition, 1992, Pages, 187 and 175.
(8) Janes International Defense Review, April 1994, Volume 1, Issue 004.	(16) Aviation Week And Space Technology, Aerospace Source Book, January 13 1997, page 148.

## Notes to the Field

### *Connecting to the Defense Information Systems Agency's (DISA) Secure Internet Protocol Router Network (SIPRNET)*

**Connecting** to the Defense Information Systems Agency's (DISA) Secure Internet Protocol Router Network (SIPRNET) requires your computer to run a Transmission Control Protocol/ Internet Protocol/Point-to-Point Protocol (TCP/IP/PPP) environment in the background. There are many TCP/IP/PPP software products available for PCs running *Microsoft® Windows 3.11/95*. This article details how to obtain, configure, and use *Trumpet Winsock®*.

#### *Obtaining Trumpet Winsock®*

*Trumpet Winsock®* is currently distributed as shareware. You may use *Trumpet Winsock®* for 30 days to evaluate its usefulness. If at the end of that time you are satisfied with *Trumpet Winsock®* as a product, you should register it.

You can download *Trumpet Winsock®* from the Internet via url:

<ftp://ftp.trumpet.com.au/winsock/twsk30d.exe>

-or-

<ftp://ftp.trumpet.com/winsock/twsk30d.exe>

A pre-configured earlier version (2.0b) for dialing into the ARAT SIPRNET PPP server is available from the ARAT Project Office (ARAT-PO). Simply request one via email:

[kragh@doim6.monmouth.army.mil](mailto:kragh@doim6.monmouth.army.mil)

or fax your request to the ARAT-PO (ATTN: Mr. Ken Kragh) at DSN 992-5238 or commercial (732) 532-5238.

#### *Loading Trumpet Winsock® onto your PC*

The ARAT-PO provided disk has a folder entitled "*trumpet*" that contains the necessary files and subfolders. Using "Windows Explorer" (*Windows 95*) or "File Manager" (*Windows 3.11*), click on the "a:" drive, and you will see a folder labeled "*trumpet*". Simply click, hold, and drag the "*trumpet*" folder onto the "c:" drive folder (or another folder of your choosing). This will copy all the necessary *Trumpet Winsock®* and other TCP/IP/PPP applications in the subfolders onto the computer's hard drive.

#### *Configuring Trumpet Winsock*

- While in Windows Explorer (*Windows 95*) or File Manager (*Windows 3.11*), double click the "*trumpwsk.exe*" file to launch the TCP/IP environment.
- In the *Trumpet Winsock®* window, click "File" from the top menu bar, then click "Setun"

*(cont. next page)*

---

**Connecting to the SIPRNET (cont.)**


---

- Enter the bold-type information enumerated below into the appropriate fields. The ARAT-PO provided disk should already have this information properly loaded. Where “blank” is indicated, do not enter any information in that field.

IP Address:	<b>0.0.0.0</b>			Default Gateway:	blank
Netmask:	blank			Time Server:	blank
Name Server:	<b>206.37.16.100</b>				
Domain Server:	<b>arat.army.smil.mil</b>				
Packet vector:	blank	MTU:	<b>576</b>	TCP RWIN:	<b>2048</b>
Demand Load Timeout (secs):	<b>5</b>			TCP MSS:	<b>512</b>
				TCP RTO MAX:	<b>60</b>

<input type="checkbox"/> Internal SLIP SLIP Port: <b>2</b> Baud Rate: <b>9600</b>	<input checked="" type="checkbox"/> Internal PPP	<div style="border: 1px solid black; padding: 5px;">         Online Status Detection          • <b>None</b>          DCD (RLSD) check          DSR Check       </div>
<input checked="" type="checkbox"/> Hardware Handshake <input checked="" type="checkbox"/> Van Jacobson CSLIP compression		

**Note:** The Com Port and Baud Rate indicated above are for example purposes. Use values applicable to your capabilities.

**Note:** Currently, the ARAT SIPRNET PPP server only supports 9600 bits per second (bps) connections, however, the DISA Comm Server can handle from 2400 to 14,400 bps. Your STU-III's highest attainable speed should be put in the "Baud Rate" box. Also, laptop computer users will need to set "SLIP PORT" to "1", not "2".

- Click the “OK” button at the bottom of the Network Configuration Setup window.
- Turn on PPP trace by clicking “Trace” from the top menu bar, then look at “PPP”. If there is a check mark to the left of “PPP”, it is turned on. If not, click on "PPP" to turn it on.

**Note:** If you made any changes to the *Trumpet Winsock*<sup>®</sup> configuration, you will need to close and then restart *Trumpet Winsock*<sup>®</sup> for the new settings to take effect.

**IMPORTANT:** The *Trumpet Winsock*<sup>®</sup> TCP/IP/PPP application must run in the background while you are using any TCP/IP applications (web browser, telnet, ftp, etc.). Therefore, do not close the *Trumpet Winsock*<sup>®</sup> window once a connection is established. You may minimize it by clicking the down arrow button (for *Windows 3.11*) or the *minimize* button (for *Windows 95* – button with a small “underscore” character in it) located in the upper right-hand corner of the *Trumpet Winsock*<sup>®</sup> window.

(cont. next page)

---

*Connecting to the SIPRNET (cont.)*

---

*ARAT SIPRNET Dial-up PPP Server Connection and Login Procedures*

- You now need to log in when connecting to the ARAT SIPRNET server by entering a userid and password. The account, when initially created, does not have a password, so you will be asked to enter one the first time you log in.
- Pick up the phone and dial the ARAT phone number, DSN (312) 992-9370, or commercial (732) 532-9370.
- After the phone begins to go into secure mode, start *Trumpet Winsock*<sup>ä</sup>. You will notice that PPP automatically starts.
- On the top menu bar, click "*Dialer*", and then click "*Manual Login*". Automatic PPP will be disabled. You should see such commentary on the screen.
- Once the STU-IIIs are fully connected "Secure Data", you should see a "*login:*" prompt on the screen. If you don't, press the "Enter" key; however, it should appear by itself.
- Enter your userid and press the "Enter" key.
- Next you should see "*password:*". Enter your password and press the "Enter" key.

**Note:** The first time, you will be prompted to enter a new password, and then re-enter it for verification purposes.

- You should see login information, followed by garbled characters, as if there is noise on the line. Press the "ESC" key to go back into automatic PPP mode.
- You should now see the PPP options being negotiated, assuming you turned on the PPP trace. When the options are finished being negotiated, you should see an IP address about halfway through the list, as well as "state=opened" on the bottom. You are now fully connected.
- Minimize *Trumpet Winsock*<sup>ä</sup> and launch your TCP/IP application(s) (i.e., web browser, mail, ftp, telnet).

Your userid will also be your SIPRNET e-mail address:

[userid@arat.army.smil.mil](mailto:userid@arat.army.smil.mil)

Please feel free to contact us if you have any further questions or complications/problems (See Page 13 for telephone numbers and e-mail addresses).

*Written by Mr. Andrew Lombardo, Ilex Systems, Inc.*

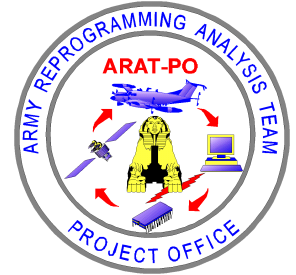


## For Your Information

### Did You Know?

**The** ARAT-PO logo (which appears to the right and also on the back cover of this issue) symbolizes the four step reprogramming process:

The aircraft at the top of the logo represents the various intelligence collection platforms used to **Determine the Threat**. Because the reprogramming process is cyclic, the aircraft also represents the End State of the process- a reprogrammed Army Target Sensing System capable of countering the threats it faces on the modern battlefield.



The computer workstation represents the sophisticated technology and superior analytical skills used to **Determine the Response**.

The computer EPROM chip below the Sphinx represents the reprogrammed software or modified hardware which are the resultant products of the third step in the process known as **Create the Change**.

The communications satellite represents the state-of-the-art technology utilized for the distribution of the information and software necessary to **Incorporate the Change**.

In the center of the logo is the ancient Sphinx. The Sphinx represents multiple facets of the reprogramming process. For example, the Sphinx is the recognized symbol for Army intelligence, without which the ARAT could not perform its daily functions. Also, the Sphinx is said to represent an entity which "knows all but does not speak". Although this can be related to the concept of secrecy (a fundamental requirement to successful intelligence-based operations), it better symbolizes the vast body of knowledge, yet quiet professionalism, of the men and women of the ARAT community. Finally, the Sphinx represents the bold advances that the ARAT-PO continues to make in the area of reprogramming of ATSS. (Remember- the design and actual construction of the Sphinx represented a major technological advance for the culture in which it was built.) To complete the logo, the Sphinx clutches a lightning bolt in its hand. This symbolizes the rapidness designed into the Army's reprogramming process.

### ARAT Rapid Reprogramming Communications Infrastructure Laboratory (R<sup>2</sup>CIL)

<b>Telephone:</b>	#1	(732) 532-9395	DSN: 992-9395
	#2	(732) 532-9329	DSN: 992-9329
	#3	(732) 532-6003	DSN: 992-6003
	#4	(732) 427-6000	DSN: 987-6000*
	Or	(732) 530-7766 ext.: 317* or 387*	

\* Answering machine/voice mail option available at this number for after-hour messages

#### Email:

Unclassified: [webmaster@iew.sed.monmouth.army.mil](mailto:webmaster@iew.sed.monmouth.army.mil)

SIPRNET: [webmaster@arat.army.smil.mil](mailto:webmaster@arat.army.smil.mil)

**Fax Number (ARAT PO):** (732) 532-5238 DSN: 992-5238

## For Your Information

### *ARAT Bulletin Article Index for 1997*

Topic	Month	Page
AAAA Symposium	February	4
ARAT Account Application	February	Insert
ARAT Services Survey	May	Insert
Aviation Mission Planning System	September	7
	December	Cover
Flagging Models	September	4
GUARDRAIL Symposium	September	11
In Process Review	September	Cover
Information Operations	February	2
Logistics Assistance Representatives	May	Cover
MSEWBBS Access	February	14
MSEWBBS Connection	September	12
MSEWBBS Contents	December	7
Netherlands Support	May	6
OFP and MDS Numbers	February	6
R2CIL Overview	May	4
Reprogramming Lessons Learned	December	6
Review of 1997	February	Cover
SIPRNET Connectivity	December	10
STU-IIIs	May	10
Training	September	2
Web Services Update	May	9
	September	6

## Season's Greetings



The staff of the "A R A T  
Bulletin" wishes Peace and  
Goodwill to the men and  
women who are defending our  
Nation this Holiday  
Season

## For Your Information

### Coming Events

<b>AUSA Aviation Symposium</b>	Falls Church, VA	12-14 January 1998
<b>AFCEA TECNET-West</b>	San Diego, CA	14-16 January 1998
<b>Ninth Annual TARDEC Ground Vehicle Symposium</b>	Monterey, CA	31 Mar.-2 Apr. 1998

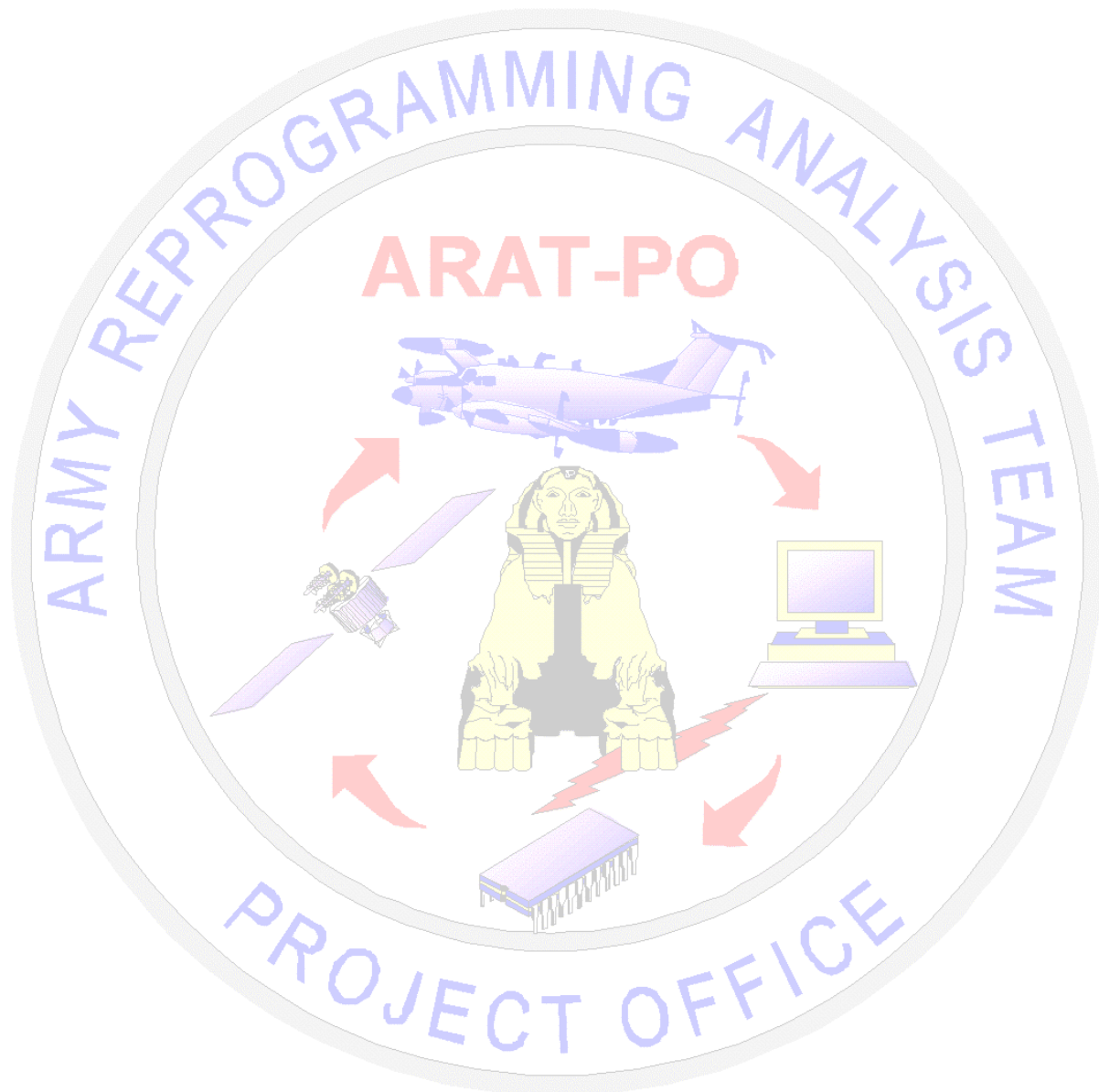
### The ARAT Community Key Points of Contact

HQDA, DAMO-FDI	Mr. Rick Simon	DSN: 227-6527 FAX: 223-5336
HQ, TRADOC	Mr. Bob Miner <a href="mailto:minerr@emh10.monroe.army.mil">minerr@emh10.monroe.army.mil</a>	DSN: 680-2664 FAX: 680-2947
HQ, INSCOM	COL Halbert Stevens	DSN: 235-1791 FAX: 656-1003
ARAT-PO	Mr. Joseph Ingrao <a href="mailto:ingrao@doim6.monmouth.army.mil">ingrao@doim6.monmouth.army.mil</a> Mr. Ken Kragh <a href="mailto:kragh@doim6.monmouth.army.mil">kragh@doim6.monmouth.army.mil</a>	DSN: 992-1337 FAX: 992-5238 DSN: 992-6003 FAX: 992-5238
ARAT-TA	LTC Robert Vrtis <a href="mailto:ravrtis@vulcan.belvoir.army.mil">ravrtis@vulcan.belvoir.army.mil</a> Mr. Norm Svarrer <a href="mailto:svarrer@wg53.eglin.af.mil">svarrer@wg53.eglin.af.mil</a>	DSN: 235-2262 FAX: 703-806-1003 DSN: 872-8899 FAX: 872-8213(C) /4268(U)
ARAT-SE (CECOM)	Mr. Jeff Boldridge <a href="mailto:boldridj@doim6.monmouth.army.mil">boldridj@doim6.monmouth.army.mil</a>	DSN: 992-8224 FAX: 992-8287
ARAT-SE (MICOM)	Mr. Gary Clayton <a href="mailto:clayton-rd-ba@redstone-emh2.army.mil">clayton-rd-ba@redstone-emh2.army.mil</a>	DSN: 746-0755 FAX: 746-0757
ARAT-SC (FT. BLISS)	Mr. Ernesto Martinez <a href="mailto:martinem@bliss-emh1.army.mil">martinem@bliss-emh1.army.mil</a>	DSN: 978-5595 FAX: 978-2773
ARAT-SC (FT. RUCKER)	Mr. George Hall <a href="mailto:george_hall_at_rucker-ms29@rucker-emh4.army.mil">george_hall_at_rucker-ms29@rucker-emh4.army.mil</a>	DSN: 558-9334 FAX: 558-1165
AFIWC (KELLY AFB) (Army Flagging)	Mr. Carl Brunner <a href="mailto:cbrunner@sdd.sri.com">cbrunner@sdd.sri.com</a>	DSN: 969-2021 FAX: (210) 977- 2145

### The ARAT Bulletin Staff

<b>Editor-In-Chief</b> Mr. Joseph Ingrao, ARAT Project Office <b>Editors</b> Mr. Joseph Skarbowski, Ilex Systems, Inc. Mr. Samuel Johnson, Ilex Systems, Inc. <b>Distribution Manager</b> Ms. Diann McConnell, EPS, Inc.	Send comments, changes of address, and articles to:  Commander, USACECOM ATTN: AMSEL-SE-WS-AI-EC Building 1210 Fort Monmouth, NJ 07703
--	---

# *ARAT BULLETIN*



**The Army Reprogramming Analysis Team Project Office publishes the “ARAT Bulletin” for administrative or operational use by U.S. Government Agencies only.**